

CLEAN COPY OF AMENDED CLAIM

1. (Amendment) A device with a stator having high performance flat coils comprising:

a stator tooth portion being punched from silicon steel pieces and having a tooth face having a cambered surface, the stator tooth having a tooth root end extending backwards from a center of the cambered surface, a distal end of the tooth root end extending outwardly with a tooth root distal end that is not larger than a maximum width of the tooth root end;

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a wire groove seat formed by an insulator and having a T-shaped contour, the wire groove seat having a longitudinally extended vertical post for receiving a respective coil of a motor or a generator and defining an axis thereof, an interior of the longitudinally extended vertical post being hollow and being engagable with the stator tooth root end, and the hollow portion being a hollow end of the wire groove seat; and

a flat coil formed as an annulus by a plurality of turns of a helically wound flat wire, the flat coil having an opening through which the longitudinally extended vertical post passes, each of the plurality of turns of the flat wire being wound in a direction normal to the coil axis, the plurality of turns being axially overlaid one upon another, a thickness of the flat wire being less than a depth of the longitudinally extended vertical post of the wire groove seat divided by a predetermined number of turns of the flat coil

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corresponding to a rated rotary speed, a width of the flat coil being smaller than a width of a winding space of the wire groove seat, a distal axial end of the flat coil being installed with an insulating piece.
